

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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Assignee: Rapt, Inc.  
Title: METHOD AND APPARATUS FOR COMPONENT PLAN ANALYSIS  
UNDER UNCERTAINTY  
Application No.: 09/823,846 Filing Date: March 30, 2001  
Examiner: Romain Jeanty Group Art Unit: 3623  
Docket No.: RAP0003US Confirmation No.: 7000

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Austin, Texas  
November 19, 2007

Mail Stop AF  
Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Dear Sir:

Applicant hereby requests review of the Final Office Action mailed July 18, 2007 (the "Final Office Action") in the above-identified application. The Final Office Action sets a three-month shortened statutory period for reply. This Request is being filed concurrently with a Notice of Appeal and a petition for a one-month extension of time that extends the period for reply to November 19, 2007 (since November 18, 2007 was a Sunday). Claims 1-27 are pending in the application. Claims 23-27 were withdrawn by constructive election in the Final Office Action. Claims 1-22 stand rejected.

***Rejections under 35 U.S.C. § 103***

The final Office action dated July 18, 2007 (the "Final Office Action") indicates on p. 4 that the pending rejections are based on the arguments that were set forth in the Office action dated September 5, 2006 (the "Office Action"). In the Final Office Action, claims 1, 3, 6, 9-14, and 16-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,006,192 issued to Cheng et al. ("*Cheng*") in view of U.S. Patent No. 5,930,762 issued to Masch ("*Masch*"). (Final Office Action at 4.) Applicant understands that this rejection also

relies on a combination of *Cheng* and *Masch* with U.S. Patent No. 6,167,405 issued to Rosensteel, Jr. et al. (“*Rosensteel*”). (Office Action at 3-4.) Claims 2, 4, 5, 7, 8, 10, 11, 15, 21, and 22 stand rejected under § 103(a) as being unpatentable over *Cheng* in view of *Masch* and further in view of U.S. Patent No. 6,453,303 issued to Li (“*Li*”).

Applicant respectfully submits that the cited portions of the references fail to disclose each limitation of Applicant’s claims.

**The cited portions of the references fail to disclose “specifying a component plan to be analyzed, the component plan identifying the quantities of each component that are positioned for each planning period.”**

For example, among the limitations of independent claim 1 is the act of “specifying a component plan to be analyzed, the component plan identifying the quantities of each component that are positioned for each planning period.” The Office Action argues on p. 3 that this limitation is presented in the cited portions of *Cheng*, and cites a portion of that reference that discloses a list of mathematical quantities for a materials planning problem. The Office Action does not, however, indicate which of the numerous variables in the lengthy passage are supposed to be viewed as corresponding to Applicant’s claim limitations. (The rejections thus fall short of the requirements set forth in 37 C.F.R. § 1.104(c)(2), and should be withdrawn at least for this reason.) Applicant submits that none of the *Cheng* quantities meets Applicant’s limitation. Nonetheless, to fully address the pending rejection, Applicant explains below that even the closest possible candidates among the *Cheng* quantities fall short of meeting Applicant’s claim limitations.

The list of quantities in *Cheng* includes variables  $Q_{i,t}$ ,  $Q_{i,0}$ ,  $X_{i,t}$ , and  $a_{ij}$ , which represent components in the materials planning problem of *Cheng*. No other aspect of the cited passage describes amounts of components; thus, these four variables are the only aspects of the cited passage that could possibly be seen as even remotely corresponding to the above claim limitation regarding a component plan to be analyzed.

Of these four quantities in *Cheng*, neither  $Q_{i,0}$  nor  $a_{ij}$  identifies quantities of each component for each planning period.  $Q_{i,0}$  is an “initial inventory” (*Cheng* at 3:51-52), and thus could be relevant, at most, only to an initial condition—not to each planning period among one

or more time planning periods. Similarly,  $a_{ij}$  does not specify quantities of components that are positioned for each planning period, because it is a rate value: it indicates the amount of component  $i$  that is needed by one unit of product  $j$  (*Cheng* at 3:33-34). Thus neither of these two quantities  $Q_{i,0}$  nor  $a_{ij}$  could be seen as identifying quantities of each component for each planning period.

The other two quantities,  $Q_{i,t}$  and  $X_{i,t}$ , also do not disclose Applicant's limitation. These quantities are not inputs to be analyzed. Rather, they are internal variables used by a mathematical analysis in *Cheng*. In contrast, claim 1 includes specifying a component plan to be analyzed prior to the ensuing analysis. Since the *Cheng* variables  $Q_{i,t}$  and  $X_{i,t}$  are not specified prior to the analysis, they also do not meet the limitation recited in the claim of a component plan to be analyzed, with the component plan identifying the quantities of each component that are positioned for each planning period.

Applicant also does not find this limitation in the cited portions of *Masch* or *Rosensteel*. This limitation is therefore absent from the cited portions of the references. At least for this reason, Applicant's independent claim 1 and all claims dependent therefrom are allowable under § 103(a). At least for similar reasons, Applicant's independent claims 9 and 16 and all claims dependent therefrom are also allowable under § 103(a).

**The cited portions of the references fail to disclose quantities that are “positioned” for each planning period.**

Additionally, none of the variables in the cited portions of *Cheng* is a quantity of components “positioned” for each planning period, as set forth in independent claim 1. As set forth in the Definitions in Applicant's specification, “positioning is an alternative to ordering components.” By positioning a component, a company or other entity “arrange[s] for it to be available without actually putting the component in inventory. Thus, as an example, a supplier may agree to provide a certain quantity of a component during a particular time frame. The component is positioned in that quantity for that time frame.” (Specification at 5.)

The system disclosed in the cited portions of *Cheng* does not use information regarding positioned components, because the cited portions of *Cheng* do not discuss the possibility of having components available without actually putting them in inventory. Rather, the cited

portions of *Cheng* appear to relate only to amounts of components that are available in inventory, and to the general area of inventory control and inventory problems. The cited portions of *Cheng* do not discuss the use of positioned components as opposed to inventoried components. (See, e.g., *Cheng* at 1:16-17, 25-29; 2:5-7; 3:40, 43, 48, 49, 51; 9:47-50.)

Accordingly, the cited portions of *Cheng* do not discuss, teach, or suggest identifying the quantities of each component that are “positioned” for each planning period. Applicant also does not find this limitation in the cited portions of *Masch* or *Rosensteel*. This limitation is therefore absent from the cited portions of the references. At least for this reason, Applicant’s independent claim 1 and all claims dependent therefrom are allowable under § 103(a).

**The cited portions of the references fail to disclose the use of “uninventoried” available components.**

Applicant’s independent claim 9 includes a limitation of capturing assumptions about products and components to create a scenario. The scenario describes the demand, financial, and operational information for one or more products and components for one or more time planning periods. Further, the components include “uninventoried” available components.

The Office Action observes on p. 3 that this limitation is not disclosed in the cited portions of *Cheng*. Nevertheless, the Office Action proposes that:

incorporating this feature into Chen[g] would have been obvious to a person of ordinary skill in the art at the time of the applicant’s invention in order to provide inventory minimization and revenue maximization.

(Office Action at 3.)

Applicant respectfully disagrees. The Office Action does not point to any reference that describes, teaches, or even suggests the proposed modification. Rather, the Office Action opines that such a modification would provide a benefit of “inventory minimization and revenue maximization.” Applicant submits that even if a person having ordinary skill in the art were motivated with such a goal, this goal would not make the proposed modification obvious.

A person having ordinary skill in the art and desiring “inventory minimization and revenue maximization” would not naturally envision the modification proposed in the Office

Action. It would be a far leap of the imagination to go from wishing for “inventory minimization and revenue maximization” to implementing the claimed limitation of capturing assumptions about products and components where the components include uninventoried available components. A person having ordinary skill in the art would not envision this limitation from the cited portions of *Cheng* with the simple motivation proposed in the Office Action.

This limitation of claim 9 is therefore absent from the cited portions of *Cheng*, and is not obvious in light of those passages. Independent claim 9 and all claims dependent therefrom are allowable under § 103(a). At least for similar reasons, independent claim 16 and all claims dependent therefrom are also allowable under § 103(a).

**CONCLUSION**

Applicant submits that all claims are now in condition for allowance, and a notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the Examiner is invited to telephone the undersigned.

If any extensions of time under 37 C.F.R. § 1.136(a) are required in order for this submission to be considered timely, Applicant hereby petitions for such extensions. Applicant also hereby authorizes that any fees due for such extensions or any other fee associated with this submission, as specified in 37 C.F.R. § 1.16 or § 1.17, be charged to deposit account 502306.

Respectfully submitted,



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